

## Remarks

Applicant gratefully acknowledges Examiner Rinehard's summary of outstanding issues set forth in the Advisory Action mailed February 8, 2011. Currently, claims 1-24 are pending, with no claims yet allowed.

Applicant specifically addresses the Office's concerns as follows:

### I. 35 U.S.C. § 112, ¶1 Rejections

Claims 1-24 were rejected under §112, ¶1, for both written description and enablement issues. In both cases, the recitation of "...actively adjusting the.... to less than about 15 ppm"<sup>1</sup> in independent claims 1, 9 and 17, and all claims depending there from, was deemed problematic.

In response, Applicant respectfully requests that the Office consider the following remarks and reconsider the Declaration Under §1.132 of Mark Shilling (the "Shilling Declaration"), a copy of which is enclosed for Examiner's convenience.<sup>2</sup>

#### A. Written Description

As set forth in the Response filed January 3, 2011, the Office has failed to **provide the requisite evidence or reasoning** to rebut the presumption of adequate written description.<sup>3</sup> On this basis, applicant believes the rejection is in error and should be withdrawn.

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<sup>1</sup> Abridged for brevity. Full recitation is "actively adjusting the reducing environment using at least two adjustments chosen from increasing the distance between the first stage and the second stage, increasing mixing within the first stage by macro-staging, reducing the mass flow, increasing the volumetric utilization, increasing the pressure, increasing the density, increasing the temperature, decreasing the stoichiometric ratio, increasing the local fuel flow, decreasing the local air flow, and decreasing micro-stage mixing, wherein by the adjusting SO<sub>3</sub> is reduced to SO<sub>2</sub> to effectuate an overall decrease in SO<sub>3</sub> concentration to less than about 15 ppm.".

<sup>2</sup> Declaration was originally filed in Response dated January 16, 2008.

<sup>3</sup> See MPEP § 2163(III)(A).

## **B. Enablement**

As set forth in the Response filed January 3, 2011, applicant believes the Office has failed to establish undue experimentation by the requisite *Wands* factors analysis.<sup>4</sup> Further, the Shilling Declaration provides evidence of the following:

- 1) The Declarant is a Person Having Ordinary Skill In The Art.<sup>5</sup>
- 2) The Declarant is familiar with the specification as filed.<sup>6</sup>
- 3) The Declarant would have known how to adjust the reducing environment by the techniques described in independent claims 1, 9 and 17.<sup>7</sup>
- 4) At the time that the application was filed, undue experimentation would not have been required to perform the invention as claimed.<sup>8</sup>

The Office deemed the Shilling Declaration “...not persuasive as it is the **opinion of an interested party** which is not supported by facts, **such as test data.**”<sup>9</sup> Mr. Shilling has not been established as an interested party, and even if he were, his statements are sworn testimony. Moreover, Mr. Shilling’s testimony is evidence of what a Person Of Ordinary Skill In The Art would have known at the time of filing, which is based on his personal experience, and not test data. Further, the declaration is replete with testified facts, examples and references to the specification, where applicable. Accordingly, Applicant respectfully requests that the Declaration be considered.

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<sup>4</sup> See MPEP § 2164.01(a).

<sup>5</sup> See paragraphs 1-5.

<sup>6</sup> See paragraph 7.

<sup>7</sup> See paragraph 13(D).

<sup>8</sup> See paragraph 12.

<sup>9</sup> See page 2 of Office Action dated 2/28/08.

## II. 35 U.S.C. §103 Rejections

Applicant specifically addresses the Office's rejections as follows:<sup>10</sup>

### A. Claims 1-24 in view of Salooja, Cahn, admitted prior art, May and Altman

For the reasons set forth in the Response filed January 3, 2011, the Office has failed to establish *prima facie* obviousness.

However, for purposes of expediting prosecution, and without disclaimer, independent claims 1, 9 and 17 have been amended to recite "...combusting the remainder of the fuel in an oxidizing environment to achieve 10 to 15 ppm by volume SO<sub>3</sub> in the exhaust ...". This limitation is not taught in the cited references.

Support for this amendment may be found, *inter alia*, on page 11, lines 4-5 of the application as filed. Accordingly, no new matter has been introduced.

Based on the patentability of independent claims 1, 9 and 17, all claims depending therefrom, namely claims 2-8, 10-16 and 18-24, are likewise believed patentable.

### B. Claims 9-16 in view of Kindig, Carver, and admitted prior art

For the reasons set forth in the Response filed January 3, 2011, the Office has failed to establish *prima facie* obviousness.

However, as discussed in section (II)A above, independent claim 9 has been amended to recite "...combusting the remainder of the fuel in an oxidizing environment to achieve 10 to 15 ppm by volume SO<sub>3</sub> in the exhaust ...". This limitation is not taught in the cited references, and no new matter has been introduced.

Based on the patentability of independent claim 9, all claims depending therefrom, namely claims 10-16, are likewise believed patentable.

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<sup>10</sup> As used herein, "Salooja" shall be shorthand for U.S. Patent No. 4,375,949; "Cahn" shorthand for U.S. Patent No. 4,029752; "May" shorthand for U.S. Patent No. 4,196,057; "Altman" shorthand for U.S Patent No. 5,011,516; "Kindig" shorthand for U.S. Patent No. 4,824,441; and "Carver" shorthand for U.S. Patent No. 4,381,718.

**C. Claims 1-3, 4-8, 9-15, 16, and 17-24 in view of Carver and admitted prior art**

For the reasons set forth in the Response filed January 3, 2011, the Office has failed to establish *prima facie* obviousness.

However, as discussed in section II(A) above, independent claims 1, 9 and 17 have been amended to recite "...combusting the remainder of the fuel in an oxidizing environment to achieve 10 to 15 ppm by volume SO<sub>3</sub> in the exhaust ...". This limitation is not taught in the cited references, and no new matter has been introduced.

Based on the patentability of independent claims 1, 9 and 17, all claims depending therefrom, namely **claims 2-8, 10-16 and 18-24**, are likewise believed patentable.

**D. Claims 4-7, 12-15, and 20-23 in view of Carver, admitted prior art, and Kindig**

The rejections of dependent claims 4-7, 12-15, and 20-23 are deemed moot in view of the patentability of independent claims 1, 9, and 17, from which the aforementioned claims depend. The nonobviousness of independent claims 1, 9, and 17 is set forth in sections II(A) – (C) above.

In summary, none of the references or supposedly admitted prior art, either alone or in combination, teach or suggest the claimed limitation of "...combusting the remainder of the fuel in an oxidizing environment *to achieve 10 to 15 ppm by volume SO<sub>3</sub> in the exhaust...*". Accordingly, rejections have been overcome and allowance on the merits is respectfully requested.

**Conclusion**

By these Remarks, applicant submits that he has placed the case in condition for immediate allowance and such action is respectfully requested. If the Office believes that any issue remains unresolved, applicant's attorney would welcome the opportunity for a telephone interview to expedite allowance and issue.

Respectfully submitted,

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